LSU | **College of Art + Design**
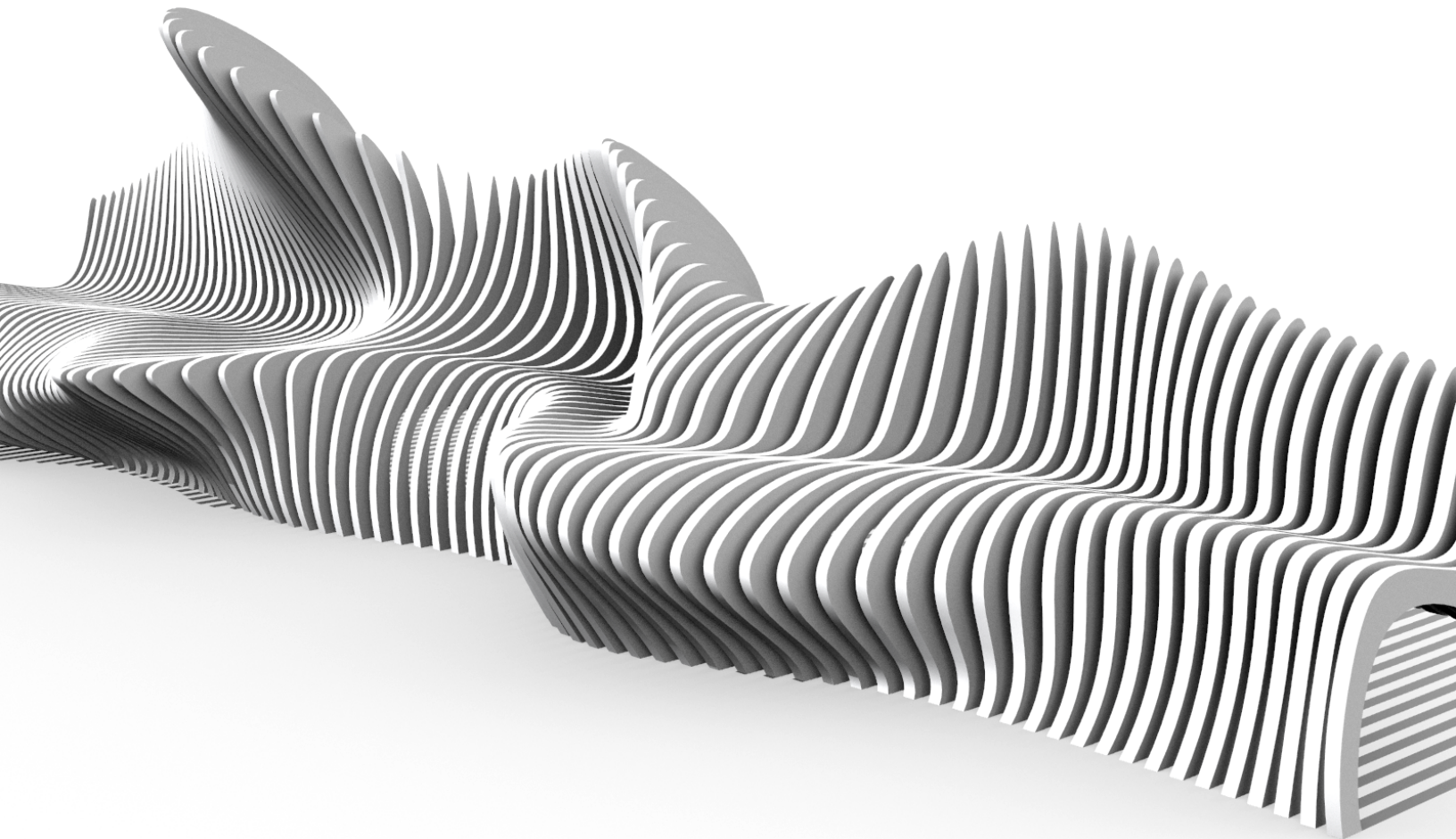
DART 7003 | **Digital Culture**

Brendan Harmon
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Fall 2018. Design 307.
Thursday 6:00pm–9:00pm.

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Course Description

This course will explore how digital culture and fabrication are changing the nature of authorship and production in art and design. In seminars we will discuss cultural, technological, theoretical and ethical changes – focusing on polyvalent authorship – and in workshops you will experiment with digital methods including programming, 3D modeling, robotics, and computer numerical controlled (CNC) machining. You will put theory into practice by writing scripts that write poems and using digital fabrication to give your poems physical form. You will collect your work in an online repository with version control and present it at a exhibition in the College of Art and Design.

Topics

Open culture

1   Open source
2   Open work
3   Open science
4   Death of the Author

Generative design

9   Death of the architect
10   Automation & fabrication
11   Digital design
12   Robotic art

Digital humanities

5   Digital humanities
6   Topic modeling
7   Digital poetry
8   Sonic art

Digital fabrication

13   Digital fabrication
14   Assembly
15   Exhibition

Course Schedule

Open culture   Poetry Repository

08.23.2018	**Open source +** *Python:* Hello World	
08.30.2018	**Open work +** *Python:* Lists & loops	
09.06.2018	**Open science +** *Python:* Dictionaries & data	
09.13.2018	**Death of the author +** *Python:* Flow control	

Humanities   Poetry Generator

09.20.2018	**Digital humanities +** Resources	Lauren Coates
09.27.2018	**Topic modeling +** Topic modeling	Lauren Coates
10.04.2018	**Digital poetry +** Poetry charette	Lara Glenum
10.11.2018	**Sonic art +** Poetry recordings	Jesse Allison

Art & Design   Poetry Model

10.18.2018	**Death of the architect +** *Rhino:* Waveforms	
10.25.2018	**Automation +** *Rhino:* Freeform modeling	
11.01.2018	**Digital design +** *Rhino:* Parametric modeling	
11.08.2018	**Robotic Art +** Arduino	Hye Yeon Nam

Fabrication   Poetry Fabrication

|	
11.15.2018	**Digital fabrication**
11.22.2018	**Assembly**
11.29.2018	**Exhibition**

Projects

Through this series of projects explore how digital culture and fabrication are changing the nature of authorship and production.

Poetry Repository Develop a GitHub repository with a Markdown manifesto or artist's statement, Python scripts for generating poetry, Rhino 3D model, 3D renderings, and g-code for CNC milling.

Poetry Generator Develop a Python script that generates poetry. Have fun and express yourself as a meta-author!

Poetry Model Capture a series of waveforms from your poems, generate a 3D model from the waveforms, and cut the model into slices for digital fabrication. Laser-cut the slices to build a small prototype of your physical poem.

Poetry Fabrication CNC mill the slices out of sheets of birch plywood and then assemble and bond the slices to build your physical poem. Setup an exhibition showcasing your algorithmic poetry.
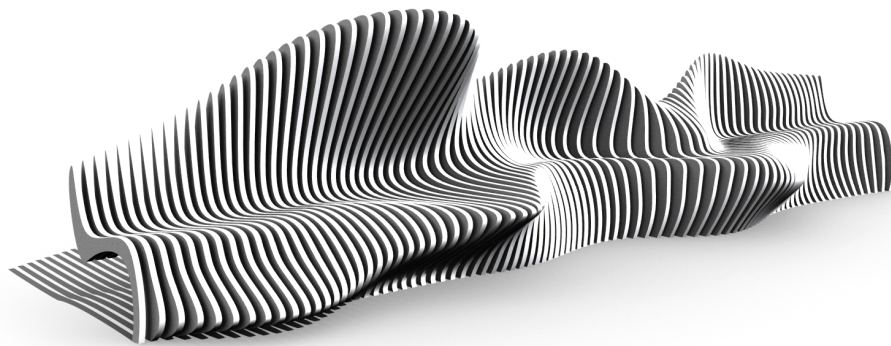
Grading

| Poetry Repository | 25% | Poetry Generator | 25% |
| Poetry Model | 25% | Poetry Fabrication | 25% |

Software

Python | `https://www.python.org/`   Rhinoceros | `https://www.rhino3d.com/`
Anaconda | `https://www.anaconda.com/`   Grasshopper | `http://grasshopper3d.com/`

Resources

Google Python Class | `https://developers.google.com/edu/python/`
GitHub Guides | `https://guides.github.com/`
Rhino Tutorials | `https://vimeo.com/rhino`
Grasshopper Primer | `http://grasshopperprimer.com`

Readings

Healy, Kieran. 2018. "The Plain Person's Guide to Plain Text Social Science."

Mallarmé, Stéphane. 2015. *A Roll of the Dice.* Trans. by Jeff Clark and Robert Bononno. Wave.

Ratti, Carlo, and Matthew Claudel. 2015. *Open Source Architecture.* Thames & Hudson London.

Tennant, Jon, and Ross Mounce. 2015. *Open Research Glossary.* doi:`10.6084/m9.figshare.1482094.v1`.

Wilf, Eitan. 2013. "Sociable Robots, Jazz Music, and Divination: Contingency as a Cultural Resource for Negotiating problems of intentionality." *American Ethnologist* 40 (4): 605–618. doi:`10.1111/amet.12041`.

Bohnacker, Hartmut, Benedikt Gross, Julia Laub, and Claudius Lazzeroni. 2012. *Generative Design: Visualize, Program, and Create with Processing.* Princeton Architectural Press.

Carpo, Mario. 2011. *The Alphabet and the Algorithm.* Cambridge, MA: MIT Press.

Picon, Antoine. 2010. *Digital Culture in Architecture: an Introduction for the Design Professions.* 224. Boston, MA: Birkhaeuser.

Latour, Bruno, et al. 2005. *Reassembling the Social: An Introduction to Actor-Network-Theory.* Oxford University Press.

Belsey, Catherine. 2002. *Poststructuralism: A Very Short Introduction.* OUP Oxford.

Deleuze, Gilles. 1993. *The Fold: Leibniz and the Baroque.* U of Minnesota Press.

Eco, Umberto. 1989. *The Open Work.* Trans. by Anna Cancogni. Harvard University Press Cambridge, MA.

Barthes, Roland. 1978. *Image-Music-Text.* Macmillan.

Policies

Time Commitment Expectations LSU's general policy states that for each credit hour, you (the student) should plan to spend at least two hours working on course related activities outside of class. Since this course is for three credit hours, you should expect to spend a minimum of six hours outside of class each week working on assignments for this course. For more information see: `http://catalog.lsu.edu/content.php?catoid=12&navoid=822`.

LSU student code of conduct The LSU student code of conduct explains student rights, excused absences, and what is expected of student behavior. Students are expected to understand this code: `http://students.lsu.edu/saa/students/code`.

Disability Code The University is committed to making reasonable efforts to assist individuals with disabilities in their efforts to avail themselves of services and programs offered by the University. To this end, Louisiana State University will provide reasonable accommodations for persons with documented qualifying disabilities. If you have a disability and feel you need accommodations in this course, you must present a letter to me from Disability Services in 115 Johnston Hall, indicating the existence of a disability and the suggested accommodations.

Academic Integrity According to section 10.1 of the LSU Code of Student Conduct, "A student may be charged with Academic Misconduct" for a variety of offenses, including the following: unauthorized copying, collusion, or collaboration; "falsifying" data or citations; "assisting someone in the commission or attempted commission of an offense"; and plagiarism, which is defined in section 10.1.H as a "lack of appropriate citation, or the unacknowledged inclusion of someone else's words, structure, ideas, or data; failure to identify a source, or the submission of essentially the same work for two assignments without permission of the instructor(s)."

Plagiarism and Citation Method Plagiarism is the "lack of appropriate citation, or the unacknowledged inclusion of someone else's words, structure, ideas, or data; failure to identify a source, or the submission of essentially the same work for two assignments without permission of the instructor(s)" (Sec. 10.1.H of the LSU Code of Student Conduct). As a student at LSU, it is your responsibility to refrain from plagiarizing the academic property of another and to utilize appropriate citation method for all coursework. In this class, it is recommended that you use Chicago Style author-date citations. Ignorance of the citation method is not an excuse for academic misconduct.